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## OUR SMOOTH PAVEMENT.

WASHINGTON HAS MORE OF IT THAN ANY OTHER CITY.

What It Costs and Where the Material for Making It Comes From—How Its Smoothness Saves in the Wear and Tear on Vehicles.

One of the many features of this city which a stranger to it is necessarily attracted by, is the delight which one receives by driving over the smooth surface of its roadways. Whichever way he may go he will find the same evenness, and the contrast between this city and the place he has left, whatever it may be, is at once apparent. Statistics will prove that the National Capital possesses more miles of smooth pavement than the aggregate of that of all the other cities of the United States. Buffalo has the distinction of possessing more asphalt pavements than any city in the world, but the combined area of the asphalt and tar pavements of this city exceeds that of Buffalo by over 50 per cent. That city has asphalt pavements extending over 51 miles in length, more than the combined area of all the asphalt roadways of Europe.

In the report of Captain Rossell in the last report of the District Commissioners the total amount of smooth pavement in the city is 81.4 miles, of which 43.3 miles is asphalt, and 38.2 miles of coal tar. In a recent speech Commissioner Douglass stated that during the past ten years 25,280,000 square yards of new pavement had been laid in this city. A large portion of this was undoubtedly either asphalt or coal tar pavement. The average cost of laying a square yard of this pavement is \$2.

During the last twelve years upwards of 3,500,000 square yards of genuine asphalt pavements have been laid in the United States. They extend over a length of more than 200 miles, and are used daily by probably 50,000 vehicles. The cubical contents of the asphalt surfaces are over 7,000,000 cubic feet. With their foundations of concrete the total contents are nearly 23,000,000 cubic feet and weigh a million and a half tons.

The other pavement which has been used in Washington is made from the refuse of gas works, and is known as coal-tar pavement. When pure its durability is as great as that of asphalt. It was first introduced in this city in 1871, and thence spread rapidly in its use all over the country. Twenty-five years ago the material for which the pavement is made was considered as refuse and the gas companies paid for hauling it away. Since then the chemistry of the hydrocarbons has made such progress that it is now commonly reported that the by-products made from the tar pay all the expenses of gasmaking and leave the gas as pure profit.

The comfort of driving over a smooth uniform surface, or of the advantage to health of a pavement which has no joints to collect street-mud when it rains, and then blow it into our lungs with the next sunshine and breeze, or of the saving of wear and tear on the nervous system by getting rid of the "mighty roar" of stone pavements cannot be denied. These considerations are quite well understood, and it is generally considered that an asphalt pavement is an agreeable luxury for residence streets. It is not so well known that the cost of maintenance is a mere function of traffic, and that where the traffic is heavy and the cost of maintenance apparently large, the corresponding saving in traction-force and in wear and tear of vehicles is still greater. The statistics and figures necessary to establish this fact are too long and complicated to be given here. But it is susceptible of direct proof that if we count the cost of paving any large city, like New York, for example, with asphalt, and maintaining it at the cost shown by years of experience under varying weights of traffic, and then count the saving in the cost of transportation and wear and tear of vehicles, it will be conclusively shown that the saving effected is very nearly three times the cost. This will not appear so remarkable when it is remembered that the transportation through the streets of New York is something over 40,000,000 ton-miles per annum, costing over \$15,000,000, and that the repairs of 30,000 vehicles and the shoeing of its 40,000 horses cost nearly \$4,000,000 in addition per annum. These figures were collected and the calculations made by Mr. F. V. Greene, formerly connected with the Engineer Commissioner's office here.

The force that draws one ton over a stone block-pavement can draw three tons over asphalt, and the cost of repairs of vehicles and horses can be reduced about one-quarter by the use of smooth pavements. The saving thus effected in both directions runs, as will be seen at a glance, into the millions of dollars per annum. When these facts come to be more widely known, it is not improbable that smooth pavements will cause a revolution in the methods and cost of transportation within cities, second only in importance to the change effected by railroads in transportation between them.

The crude asphalt which is used in this city is supplied by the Barber Asphalt Paving Company which owns "lakes" of it on the island of Trinidad.

The asphalt of Trinidad is found in a so-

called "lake," situated about 100 feet above the sea, and about 3 miles from the shore of the island. Its area is about 114 acres; its depth, as far as ascertained by rude borings, is about 18 feet at the sides and 78 feet in the centre. If these figures are correct, the lake contains about 6,000,000 tons of asphalt. Whether these borings are even approximately accurate is, however, very doubtful. It is even contended by some that the lake is still fed from underground sources. The only positive information on the subject is the fact that the excavations of the last ten years, amounting to about 180,000 tons, have not appreciably lowered its level; and for all practical purposes, at the present rate of consumption, it may be said to be inexhaustible.

The word "lake," applied to this deposit, is an entire misnomer. It is a level tract of brownish material having an earthy appearance. Cracks or fissures, having a width and depth of a few feet, appear here and there over the surface. Some travelers have reported that the deposit is liquid in the middle, but such is not the fact. Carts and mules can be driven everywhere on its surface.

The material is dug with a pick and shovel, loaded into carts, and hauled to the beach. Here it is placed in baskets, which are carried by coolies wading through the surf to lighters, and from these lighters it is loaded on vessels. During the voyage the material unites into a solid mass, and has to be removed again by the use of the pick and shovel. On being unloaded it is placed for about five days in large tanks heated by a slow fire. The moisture is expelled, the roots of trees and other vegetable matters are skimmed off the surface, the earthy matter with which it is combined settles by gravity, and the refined product is run off into barrels. This refining is in reality a mere heating to a liquid condition, in order to allow the sediment to deposit, and great care is taken not to heat the material to a point which will in any way change its chemical condition or produce distillation.

The form of construction of roadway pavements which has usually been followed is a rigid foundation of ordinary concrete, six inches thick, on which the asphalt wearing-surface is placed. In some instances, the foundation is of bituminous concrete. Each form of foundation has its advantages and disadvantages. The ordinary concrete has an excess of strength for the purpose, and the bituminous concrete is doubtless strong enough. With ordinary concrete, the bond between the foundation and the wearing surface is not very great; hence it is very easy to strip off the surface in case repairs are necessary; but, on the other hand, the surface slips on the foundation, and, under traffic, rolls into waves and irregular surfaces, and sometimes cracks with sudden and great changes of temperature. With bituminous concrete, the foundation and wearing surface are united into one mass and cannot easily be separated. Repairs are more difficult, but waving and cracking are less frequent. The bituminous concrete is less expensive.

## ON WASHINGTON HEIGHTS.

The Handsome House Which Colonel Andrews Will Build.

Colonel George L. Andrews, of the Army, intends making Washington his home after his return from active life on the frontier and will build a handsome and spacious house on Washington Heights, at the corner of Columbia Road and Mintwood Place, from plans now being prepared by Architect T. F. Schneider. It will be a double house, with a large square hall from which a broad oak staircase will begin, with balcony and nook screened with carved oak. On the first floor will be parlor, library, dining-room, kitchen, butler's pantry and store-room, also a back stairway. The chambers on the two upper floors will be correspondingly arranged. The parlor will be finished in white and gold, the library and hall in oak and the dining-room in walnut. The upper stories will be painted in parti-colors. The house will be built of brick with red stone trimmings, and an open veranda will extend partly around the building, with a porté cochère on the north side. The design will be on the Romanesque style, with a very high slate roof. The outlines of the house will be broken by a small tower on the east corner and swell bay windows on the other fronts. A large stable will also be built on a corner of the spacious grounds and will be in keeping with the design of the house.

## Those Offensive Odors.

Said a citizen: "In passing through the most frequented parts of the city, late in the evening and early in the morning particularly, the variety of smells that assail the nostrils is sickening. In most cases the noxious odors arise from the basements of restaurants, where the refuse of clams and crabs are dumped into the vaults under the sidewalks preparatory to being carted off. It is a nuisance that could be easily abated, and the Health Officer should either require the foul stuff to be removed daily or prescribe frequent doses of chloride of lime, which, if not used as directed, should at once be a cause for having the neglectful establishment indicted as a nuisance."

Theodore A. Harding has taken out a permit for the erection of a handsome residence at 1628 Nineteenth street from plans drawn by Architect George S. Cooper. The building will be three stories and a basement in height and will cost \$5,000.

## WORK AT LAST BEGUN

ON A STRUCTURE WASHINGTON HAS LONG NEEDED.

The New Metzerott Music Hall on Twelfth Street Now Under Way—It Will Be Specially Adapted for Musical Entertainments—To Be Finished by December 1.

The three buildings on the east side of Twelfth street, just below the corner of F, which were formerly occupied by the Emergency Hospital, the Newsboys' Home, and a wing of Metzerott's building, have been demolished, leaving a space 80x100 feet, upon which the handsome new Metzerott Hall will be erected. The work on the foundation will begin at once, and a large force of men will carry it forward to completion with all possible despatch. The contract for the construction is let to Mr. Plager, and it calls for the hall to be ready for occupancy by the 1st of December. When completed the building will be one of the most handsome and attractive in the city. The front, which will reach the height of 80 feet, will be a fine example of architecture. It will be highly ornamental, and the materials used will be buff brick and terra cotta, worked into unique designs. Broad steps will lead up to the entrance, which will open into the concert hall, the dimensions of which are to be 75x100 feet.

This will give a seating capacity of 2,000 people. At the further end will be a large stage, the back-ground of which will be shell shaped, thus affording that resonance of sound which the files and intervening pillars of a theatre do not permit of. There will be no scenery, but the interior decoration, which will be in the style of the Italian renaissance, will be of the most elaborate character. The ceiling of the hall proper will be sixty feet high, thus giving the best of ventilation and plenty of light. Though considerable has been written about this new hall, its true purpose is evidently not well understood. This city has never had a concert hall in the true sense of the word and entertainments of this nature have been dependent upon the accommodations afforded by theatres and churches. These structures do not bring out the full effect of music, as it is necessary in order that the best result should be obtained that the building be constructed with particular care as to its acoustic properties. The floor will be level, so that it can be cleared to be used either for a grand ball or a banquet. It can also be utilized for conventions, or mass-meetings, thus filling a want which has been long felt in this city. For purposes of this character the hall will be unsurpassed, and in many respects it will equal that of the well-known Carnegie Hall in Pittsburgh. Another feature of the new building will be a smaller hall, 35x75 feet, beneath the larger one, which can be used for piano recitals or as a room for select parties. The entire building will be lighted by electricity, and every modern convenience to make the hall perfect for the purposes to which it will be put will be utilized. A number of dates have already been secured with prominent musicians to give concerts there, among others being Theodore Thomas, Walter Damrosch, Boston Symphony Club, and that popular local organization, the Georgetown Orchestra. Now that Lincoln Hall will be a legitimate theatre the need of the new concert hall is more severely felt.

## ERNST'S RECOMMENDATIONS

For Improvements About the Public Parks and Reservations.

The annual report of Colonel O. H. Ernst, the engineer in charge of the public buildings and grounds in this city, which was forwarded to Colonel Casey on Friday, contains many statements of interest regarding the improvements to our parks and other public places in the city. He calls attention to the fact that there is an immediate necessity that those telegraph poles in the city be either replaced with new ones or that the wires be placed underground. The need of a clerical force to aid the draughtsman of public buildings and grounds is set forth, and the manner of lighting the Executive Mansion by electricity is explained in detail. Colonel Ernst urges that sufficient sums be appropriated for the following purposes: For a granite curbing around Franklin Square; asphalt walks to replace the gravel paths in Washington Circle, Mount Vernon Square, the south side of the White House grounds, Lincoln Square, Stanton Square, Folger Square, Marion Square, Henry Park, and Heaton Park; lodges for watchmen in Stanton, Mount Vernon, Iowa, Dupont, Thomas, McPherson, and Folger reservations; an ornamental fountain in Lafayette Square upon the site left vacant by the removal of the Lafayette statue; a granolithic pavement in place of the old flagging in the grounds in front of the White House; new superstructures of the green houses connected with the Executive Mansion; standards for eight elevated electric lights in the monument grounds.

Judge Hagner on Friday granted an injunction in the case of H. W. T. Jenner against the District, enjoining the opening of T street from Lincoln avenue to Second street east through the complainant's lands.

## BROOKLAND'S NEW HOTEL.

The Contracts Let and Work to Begin This Week.

The pleasant suburb of Brookland is to have a handsome new hotel added to its attractions and conveniences. The building will be beautifully located on the high ground of University Heights, the former site of old Fort Bunker Hill. From its broad verandas and observatory towers magnificent views can be had of the diversified landscape of the surrounding country and neighboring places of interest. The Catholic University is but a short distance away, and the buildings and grounds of the Soldiers' Home are within plain view. To the south the Capitol and Washington Monument loom up, while beyond them the broad waters of the winding Potomac can be plainly seen for several miles. The site is sufficiently far removed from the railroad, so that guests will not be disturbed by the noise of passing trains and other features inseparable from railroad traffic, but at the same time the distance can be covered by pedestrians in a few minutes.

The contracts for the construction of the hotel, which will be built by a syndicate of Washington gentlemen interested in the development of Brookland, were signed a couple of days ago by W. A. Kemmel, the builder, of this city. They call for the immediate beginning of work under their provisions, and the contractor expects to commence operations on the site this week. The entire work of construction will be under the direct supervision of Jonas Gibbs & Co., the well-known architects and real estate operators, by whom the plans for the handsome and commodious structure were designed.

The building will be of frame with stone trimmings. Its total length will be 170 feet, and extending across the entire front will be a commodious veranda. In height it will be three stories and will contain eighty-five large, well lighted and airy rooms. At each end of the building there will be an observatory tower, under one of which there will be a uniquely-designed stone porté-cochère. The other tower will be of stone and circular in form. The general style of the edifice will be colonial and the whole appearance will be most attractive and home like. The interior will be handsomely finished and every modern convenience will be placed in the building. The grounds upon which the hotel will be located contain 165,000 square feet. After the completion of the hotel these will be artistically laid out and beautified in every possible way. It is believed that the structure will be finished in something less than six months. It will be formally opened to the public in the early spring. In whose hands the management of the hotel will be placed has not yet been decided.

## REAL ESTATE MARKET DULL.

But There is Great Activity in Building Operations.

The real estate market continues to languish in the dullness usual at this time of the year. It was without special feature the past week aside from this dullness. There were few transactions recorded of any importance and the total number was small. A good many suburban lots changed hands in the better advertised subdivisions. A great many of the dealers and operators are now out of town on their vacations and little effort is making to push sales. The F-street offices have a general air which indicates that the occupants are not worrying much about business, because they know business is out of season.

On the other hand, building operations are now in full blast in all parts of the city and in the suburbs. The activity in this line is as great as it has ever been at this time of year in past seasons, probably greater. This is not only true of the business section, but of the residence sections of the city as well. Large numbers of new dwellings are going up, many of them large, ornamental structures, costing many thousands of dollars. This makes great activity in the labor market and in all the building trades.

The building permits for the week ending Friday showed a decided increase over those of the week previous. The total number of permits issued was 24, providing for the erection of 48 buildings. Of this number 27 are to be built in the northwest section, at a cost of \$82,300; in the northeast 8, at a cost of \$33,000; in the southeast 3, at a cost of \$3,100; in the southwest 2, at a cost of \$19,100; in Le Droit Park 1, costing \$2,500, and in the County 7, at a cost of \$30,000, making the total cost \$179,000.

## A Hotel Made of Paper.

There seems to be practically no limitation to the uses to which paper can be and is applied. To the long list of articles intended for personal use and in the smaller details of construction in rolling stock, such as wheels, axles, etc., there has been added more extensive application of paper to the needs of everyday life by the building of an hotel constructed of this material.

This novel residence, which has just been finished, and is situated in Hamburg, has been made entirely of paper boards, which, it is said, are of the hardness of wood, but possess an advantage over the latter material in that they are fireproof, this desirable end being effected by impregnation with certain chemical solutions.

## WITHOUT DUE NOTICE.

THE NEW BUILDING REGULATIONS MADE OPERATIVE TOO SOON.

They Interfered With the Plans of Builders and in Response to Complaints They Are Suspended Until August 1.

The Commissioners decided last week to withhold from immediate operation the new building regulations and set August 1 as the date upon which they will go into effect. This action was taken after the unfairness of the method of putting the new regulations into operation before the public had been given an opportunity of learning just what the changes were had been pointed out. On the 26th of June, when the new regulations had been completed by Inspector Entwistle, the Commissioners issued an order approving them and fixing the next day as the time they should become operative. Before that time the public had had no opportunity to learn what the changes were to be and at the time the order was issued a brief statement of the most important changes were published in the local press. It was not until some time later that the new regulations were printed in pamphlet form for the use of the public. But one written complaint was filed against this action, though a great many builders when at the District Buildings to obtain permits spoke rather forcibly about the injustice of putting the new law into effect before the changes were advertised. Many persons whose plans had been completed found that if they were held by the new laws that a new set of plans would have to be made, thus entailing considerable expense. The decision was then reached by the Commissioners to withdraw the order making the new regulations immediately operative and set August 1 as the time for them to take effect, after due advertisement of the changes in the press. The written complaint was sent by Woodward & Lothrop, who obtained their permit on the very day the new regulations originally went into effect. This firm had made their estimates, contracts, etc., and their plans included a large vault. When their builder went to get his permit he found that the fee for the vault had been increased from 3 to 15 cents per cubic foot, thus increasing the estimate five times. President Hurt, of the Washington and Georgetown Railroad Company, waited on the Commissioners to learn the status of the new power-house. The plans for this building, including an immense vault, had been approved some time before, but no permit had been obtained for the vault. This vault is the one in which the machinery for running the cables from the building to the street will be placed, and necessarily will be a very large one. It will occupy the entire width of the street, and in order to have a clear space mains and sewers at that spot will have to be changed, at a cost of \$25,000. In this case the Commissioners decided that as the plans had been previously approved the old fee of 3 cents per cubic foot would hold. W. B. Moses & Sons were placed in a similar position. The changes in the building regulations have been published heretofore in THE HERALD.

## The Lumber Inspection Law.

In an opinion rendered last week to the Commissioners Assistant Attorney S. T. Thomas answered the objection made by lumber dealers to the enforcement of the law regarding the inspection and measurement of lumber. The dealers held that the law should be inoperative, as they claimed that the Commissioners are not the legal successors of the Mayor, who had the right to appoint lumber inspectors. In his opinion Mr. Thomas quotes from several acts to show that the point that the Commissioners are not the legal successors of the Mayor has nothing to do with the question. He believes that inspection elsewhere does not exempt the dealer from inspection here. An additional charge by the inspector for "handling" he considers to be illegal. He interprets the language of the act to mean that the inspection shall take place at the time the lumber is sold for building purposes, for the reason that when lumber first arrives it is often in the green state and an inspection at that time would not show its condition when sold. He states that if it be said that five inspectors are unable to do this work at this time the law should be amended so as to meet the difficulty. On the same day Mr. Thomas also submitted an opinion to the Commissioners in which he declares it to be illegal for inspectors of lumber to secure an assistant to perform the inspector's work while the latter is absent. "I think," he said, "the inspector should attend personally to his duties."

## Can't Bear the Sight.

The latest fad of the delicately sensitive is exhibited in the petition of several persons on Capitol Hill to the Commissioners to embody in the police regulations a clause prohibiting housekeepers from killing chickens for dinner in their back yards in view of their neighbors. The petitioners state that the sight of the bleeding necks and convulsive floppings of the beheaded fowls is abhorrent to them. As yet the Commissioners have taken no action in the premises.